CAPSULE SUMMARY OF ACTIVE TASKS

April 1, 2006

UNITED STATES MEMBER STATE SUPPORT PROGRAM TO IAEA SAFEGUARDS

DEPARTMENT OF ENERGY DEPARTMENT OF STATE NUCLEAR REGULATORY COMMISSION DEPARTMENT OF DEFENSE

INTERNATIONAL SAFEGUARDS PROJECT OFFICE BROOKHAVEN NATIONAL LABORATORY UPTON, LONG ISLAND, NEW YORK 11973

Currently Active Tasks

| | Title | | , | |
|-----------------|--|--------------|---|--|
| TaskID A.116 | Subtask [Agency# / Task Officer] Field Support Instruments and Techniques [USA A 931 / R. Carchon] | Organization | Total Budget | Total Spent Comments |
| | A.116.83 | LANL | \$248,000.00 | \$246,413.00 Cascade Header Enrichment Monitor (CHEM) - The CHEM program and documentation was modified at the request of David Langlands (IAEA - SGOA). The new software version and manual were sent to the IAEA for installation and verification that the software meets all of the IAEA's needs. No further work is anticipated on the project. This subtask may be closed when the IAEA confirms that the deliverable is acceptable. |
| A.202 | Separation of Plutonium Isotopes for the Proc High Purity Spike Reference Materials [USA A 909 / D. Donohue] | duction of | | |
| | • | LANL | \$17,100.00 | \$17,100.00 |
| | | | | There was no activity planned for this quarter. |
| | | NBL | \$137,225.00 | \$64,207.00 |
| | | | | NBL prepared a proposal to support certification of Pu-244 spikes. The scope of the proposal is to provide support for the certification of the reference materials by hiring of a technical staff member to serve as project leader and analyst. This aspect of the proposal will help to meet project deadlines in a more timely manner and assist with the overall goal of the project. Discussions between NBL and ISPO/POTAS have continued. The SSTS approved this proposal and funding for the first two years of effort at its March 28, 2006, meeting. The project to certify the reference materials is expected to take six years. The SSTS is committed to funding the long-term effort, assuming the availability of funds. |
| | | ORNL | \$101,612.00 | \$101,612.00 ORNL is responsible for the shipment of the source material (FP-33) to the IAEA. ORNL was tasked to analyze the material to determine its isotopic composition and impurity content. The final analytical results of the FP-33 were transmitted and accepted by the IAEA in January 2006. The IAEA has indicated that further analysis of the FP-33 is not needed at this time. The remaining activity on this task is to ship the production portion (4.5 grams) of the FP-33 to the IAEA. The IAEA will notify ORNL when the shipment should occur, which may not be until |

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| TaskID A.218 | Subtask | Title [Agency# / Task Officer] Controlled Potential Coulometry of 1 mg Pu with Coulometer [USA A 1049 / S. Balsley] | Organization SRL | Total Budget | Total S _l | ent Comments |
|-----------------|----------|---|---------------------|--------------|----------------------|--|
| | | [USA A 1049 / S. Baisley] | SRNL | \$392,023.00 | \$267,278. | The SSTS approved funding by e-poll on March 23 for Savannah River National Laboratory (SRNL) to provide two experts to perform a biennial maintenance check of the IAEA-SAL coulometry system. SRNL has submitted foreign travel paperwork, in preparation for the upcoming coulometry maintenance visit to SAL in June. |
| A.223 | | Technical Support to the Clean Laboratory [USA A 1081 / D. Donohue] | | | | |
| | A.223.09 | | LANL | \$107,000.00 | \$60,644. | Deward W. Efurd (LANL) worked at the Seibersdorf Analytical Laboratory (SAL) from March 21 to 24, 2006, with Taeko Shinonaga and Stephan Vogt (both of the IAEA). This visit was a follow-up to the training at LANL on techniques used to perform bulk analyses on environmental samples collected by the IAEA in support of Safeguards. Topics reviewed included refurbishment and re-certification of clean room facilities, QA/QC protocols used to verify clean room cleanliness, ISO-9000 audit preparation procedures, protocols for blanking clean rooms for uranium and plutonium contamination, cleaning anion exchange resin, anion exchange chromatography techniques for separating actinides from complex matrices, use of secondary ionization mass spectrometry and inductively coupled plasma mass spectrometry measurement techniques in support of clean room activities, bulk analyses on single particles, certification of intermediate level chemical processing laboratories, and the protocols for blanking chemical processing facilities. This subtask is complete. |
| A.233 | | NDA Verification Techniques for BRN Enrichmen | nt | | | |
| | | [USA A 1157 / R. Lafolie] | ORNL | \$561,870.00 | \$561,870. | 00 This task is on stand by. |

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| TaskID A.241 | Title Subtas [Agency# / Task Officer] Development of Integrated Review Softw [USA A 1238 / C. Liguori] | Organizatio are for UMS | Total Budget | t Total Spent Comments |
|-----------------|--|----------------------------|--------------|--|
| | | LANL | \$402,000.00 | \$342,712.00 LANL Integrated Review Software (IRS) - Generic definitions and interfaces for analysis and import COM libraries were updated. The generic test driver for import libraries was updated. The Import Library Test Driver was updated to be compatible with updates to generic interface specifications. |
| | A.241.01 | LANL | \$168,870.00 | Adoption of Operator Provided Declarations (OPD) Data into Generic Software - There has been no activity because the requirements document review has not been completed. An IAEA approved plan needs to be established, which includes due dates for the requirements and design documents review, and for the final delivery of the software. LANL will work with the IAEA to develop this plan. |
| | A.241.02 | LANL | \$123,000.00 | Prototype Analysis Module - The first analysis component object module (COM) CoEventAnalysis is being developed. Most methods of the interface have been implemented. The interface documentation has been updated. Changes have been made to Radiation Review to execute the Find Event analysis algorithms by calls to the COM. Remaining work consists of moving the dialog box into the COM and implementing some of the infrequently used interfaces. |
| | A.241.03 | LANL | \$27,000.00 | Implementation of VIFM Analysis - This task involves providing support to the IAEA to integrate the VXI Integrated Fuel Monitor (VIFM) Analysis COM written by the IAEA. There has been no work on this activity this quarter. The task is dependent on IAEA producing the VIFM Analysis COM to be integrated into Radiation Review. |
| | A.241.04 | LANL | \$74,000.00 | IRS Upper Layer Redesign and Standardization - There has been no activity on this task during this quarter due to work on higher priority tasks, as directed by the IAEA. |

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| | | Title | | | | |
|-----------------|----------|--|------------------|--------------|-------------|--|
| TaskID A.242 | Subtas | [Agency# / Task Officer] Evaluation of Miniature GRAND Electronic Unit [USA A 1239 / Y. Lee] | Organizatio t | Total Budget | Total Spent | t Comments |
| | A.242.02 | | LANL | \$220,000.00 | \$206,889.0 | MiniGRAND Commercialization - Both Aquila and LANL are diagnosing the cause of observed humidity problems with the Digital Camera Module (DCM) boards. Aquila and LANL are upgrading their environmental chambers to be able to test these units in varying humidity to identify the cause of these problems. The humidity diagnosis work can be determined to fall under the task of commercialization. Neither LANL or Aquila have funding to properly perform the humidity tests. LANL requests that this project remain open to address potential commercialization issues, including part obsolescence, packaging, and design issues. |
| | A.242.06 | | LANL | \$714,000.00 | \$628,697.0 | MiniGRAND Microprocessor Board (MPB) Upgrade - Mike Browne (LANL) had discussions in Vienna with the IAEA regarding commercialization of the new MPB. The SSTS approved funding under this subtask on February 2, 2006, for the procurement, testing, and commercialization of the new MiniGRAND MPB. |
| | A.242.09 | | LANL | \$19,000.00 | \$17,384.0 | MiniGRAND and Auxiliary Communication Device (ACD) Testing - ACD tests have been completed, modifications have been approved, design changes have been implemented, and the ACDs are available for commercial purchase. It was determined that series resistors should be installed on nine signal lines to reduce ringing. These changes were incorporated into the design and have been tested. LANL has indicated that all work has been completed. |

indicated that all work has been completed. ISPO will obtain IAEA

concurrence prior to project closeout.

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| | | Title | | | | |
|--------|----------|--|-------------|---------------------|--------------------|--|
| TaskID | Subtas | [Agency# / Task Officer] | Organizatio | Total Budget | Total Spent | Comments |
| A.247 | | Support for the Development of the SG System Rokkasho Reprocessing Plant [USA A 1351 / C. Creusot] | n at | | | |
| | A.247.05 | - | LANL | \$814,000.00 | ! ! | RRP Integration of Inspection Equipment - The Vitrified Canister Assay System (VCAS) detector and two external monitors were shipped from LANL and received in Japan. This shipment completes the VCAS section of this subtask. Work is in progress on the data acquisition system for the Temporary Canister Verification System (TCVS). A factory acceptance test was held at LANL in January 2006 with representatives from Japan Nuclear Fuel Limited (JNFL) and the IAEA. Equipment has been shipped to Japan and Vienna. Modifications to several IAEA electronic modules are in progress, with shipment to Japan to follow. |
| | A.247.09 | | LANL | \$176,000.00 | \$166,783.00 | |
| | | | | | | RRP Project Coordination - This subtask provides LANL with funding for regular reporting to the IAEA on all LANL Rokkasho Reprocessing Plant (RRP) work. This subtask is in progress. |
| | A.247.18 | | LANL | \$191,000.00 | | Stand-Alone Integrated Review Software (IRS) and Training - This subtask involves the provision of an IRS based on generic LANL software, but tailored for use at RRP. This system is intended to be used as an interim and backup review system to the Integrated Inspector Information System. The first version of the review software was delivered in January 2006 to the IAEA. The initial tests revealed no problems. The IAEA plans to install the software at RRP with the assistance of LANL. The method for presenting the results from Waste Crate Assay System-A has not been decided yet. The software will not be fully operational until after the calibration exercises have been carried out on the Non Destructive Assay systems, which are the Temporary Canister Verification System and the improved Plutonium Canister Assay System. These calibration exercises are planned tentatively for August/September 2006. |
| | A.247.19 | | LANL | \$866,500.00 | | UNARM Tool COM Support for NDAR - This subtask involves the conversion of existing LANL software to component object modules (COMs) to support the Non Destructive Assay Review (NDAR) system at RRP. The level of functionality required in a set of prototype import and analysis modules was greater than LANL understood it to be from the statement of work. LANL brought the prototype modules up to the IAEA desired level of functionality. LANL expects to deliver the Input Storage Verification System-related components by May 8, 2006. A Project Review meeting with the IAEA has been scheduled in Vienna for early May 2006. |

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May 2006.

| | Title | | | | |
|--------|-------------------------------------|----------------|---------------------|--------------------|---|
| TaskID | Subtas [Agency# / Task Officer] | Organizatio | Total Budget | Total Spent | |
| | A.247.20 | LANL | \$109,000.00 | \$5,581.00 | |
| | | | | i (| Calibration of Safeguards Equipment at RRP - Funding was approved for this subtask at the February 2, 2006, SSTS meeting. This subtask involves the calibration of three RRP systems: the Improved Plutonium Canister Assay System, the Directional Canister Passage Detector, and the Mixed Oxide Containment and Surveillance System. |
| A.248 | Gate Monitor at LWRs Loaded with MC | X Assemblies | | | |
| | [JNT USA A 1356 / T. Pochet] | | | | |
| | | LANL | \$330,000.00 | \$304,371.00 | |
| | | | | | LANL is preparing the N-1 calibration facility to calibrate the system prior to shipment. |
| A.250 | Enhanced ANM Capability for HKED So | oftware at SAL | | | |
| | [USA A 1369 / N. Doubek] | | | | |
| | A.250.01 | LANL | \$165,000.00 | \$165,203.00 | |
| | | | | t a | LANL provided a letter to the IAEA committing to continued support to the hybrid k-edge densitometer (HKED). This task is on stand by, as agreed at the USSP Annual Task Review Meeting held in Vienna on February 23 and 24, 2006. The IAEA is expected to request additional work from LANL involving the HKED. |
| A.251 | Expert - Instrumentation Systems | | | | |
| | [USA E 1372 / M. Aparo] | | | | |
| | | CFE | \$550,000.00 | \$537,408.23 | |
| | | | | | The expert James Halbig will complete his assignment with the IAEA on April 14, 2006. |

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| | Title | | | |
|-----------------|---|-------------|--------------|--|
| TaskID A.252 | Subtas [Agency# / Task Officer] Field Support and Implementation [USA A 931 / R. Carchon] | Organizatio | Total Budget | Total Spent Comments |
| | A.252.08 | BNL/NCT | \$53,185.55 | \$58,944.00 |
| | | | | HEU Down Blending Ulba - The IAEA accepted the "Consultant's Report on Down Blending of HEU at the Ulba Fuel Fabrication Facility in Oskemen, Kazakhstan." This subtask is closed. |
| | A.252.10 | BNL/NCT | \$68,744.00 | \$68,612.00 |
| | | | | Neutron Camera - The final report has been submitted and found to be acceptable. This subtask is closed. |
| | A.252.10 | LLNL | \$81,000.00 | \$75,204.20 |
| | | | | Gamma Camera - The final report has been submitted and found to be acceptable. This subtask is closed. |
| | A.252.14 | LANL | \$146,000.00 | \$123,470.00 |
| | | | | The Fork Detector Measurement Software version 2 integrated in the LANL UMS (or UNARM) software system was delivered to the IAEA in December 2005. A meeting was held in January in Vienna to discuss, and to agree upon, improvements for the software. LANL is preparing a time and effort estimate for the agreed upon improvements, which were requested by IAEA inspectors. |
| | A.252.16 | LANL | \$34,500.00 | \$34,500.00 |
| | | | | Recalibration of the Hulls Measurement and Monitoring System (HMSS) ISPO is waiting for the IAEA to accept the final report. |
| | A.252.19 | ORNL | \$78,000.00 | \$14,769.00 |
| | | | | ORIGEN Evolution Code Development for Safeguards - The SSTS approved funding at the February 2, 2006, meeting for ORNL to complet phase 1 of this effort. ORNL will use the SCALE 5 system to model the RBMK reactor fuel assemblies using two-dimensional reactor physics transport codes in the suite and to generate burn up dependent cross section libraries for use with ORIGEN-ARP. ORIGEN is used by the Agency for RBMK spent fuel safeguards applications. |
| | A.252.20 | LANL | \$28,000.00 | \$1,695.00 |
| A.256 | Evaluation Software for HKED Spectra the Joint IAEA/JSGO On Site Analytics the Rokkasho Reprocessing Plant [USA A 1420 / G. Duhamel] | | | |
| | | LANL | \$160,000.00 | \$160,188.00 |
| | | | | This task is closed, as agreed at the USSP Annual Task Review Meeting held in Vienna on February 23 and 24, 2006. |

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| T 1 T | Title | | T () D) (| TT (1 C) | |
|-----------------|--|-------------------------|--------------|--------------|---|
| TaskID A.257 | Subtas [Agency# / Task Officer] Consultant - Chemical Separation Techni Environmental Samples [USA A 1432 / Y. Kuno] | Organizatio ques for | Total Budget | Total Spent | Comments |
| | | Clemson | \$298,000.00 | \$261,071.00 | |
| | | | | : | This task has provided expertise to improve certain radiochemistry separation methods used in the analysis of radionuclides in safeguard samples at the IAEA Safeguards Analytical Laboratory (SAL). The final report has been received. The task is closed. |
| A.258 | Detection System for In Situ Measuremer Signatures from Spent Fuel Storage Con | | | | |
| | [USA A 1434 / Y. Lee] | | | | |
| | | LANL | \$180,000.00 | \$226,008.00 | |
| | | | | | This task involves the design of a detector with the capability of in-situ reverification of the nuclear material inventory inside dry storage casks (both concrete and metal), in the event of the loss of continuity of knowledge and/or other reasons. LANL is preparing a detailed project status report of the work accomplished. ISPO will present this report to the IAEA to determine if additional funding will be requested to complete this task. |
| A.259 | Expert - Development of New Seals [USA E 1452 / M. Zendel] | | | | |
| | | CFE | \$319,568.00 | \$319,568.00 | |
| | | | | | This CFE task was completed on January 31, 2006. The expert Halvor Undem has been reassigned under Task E.148: "Expert - Senior Sealing Systems Engineer." |
| A.262 | Coordinated Experts' Meeting on Noble 6 Monitoring and Sampling [JNT USA A 1494 / J. Whichello] | as | | | |
| | | BNL | \$25,000.00 | \$23,722.00 | |
| | | | | | Robert Bari (BNL) attended the Noble Gas Monitoring and Sampling meeting in Vienna from September 12 to 16, 2005. Dr. Bari's involvement with this task has ended. BNL's involvement is complete. |
| | | PNNL | \$117,194.00 | \$84,977.92 | ! |
| | | | | | PNNL worked to finalize the IAEA report from the technical meeting held in late September 2005. Ted Bowyer has received comments from most of the attendees at the meeting. A first cut at incorporating all of the comments from individual countries was made and will be circulated, as soon as an editorial review is complete. Dr. Bowyer has been asked to go to Vienna to brief the results of the study to the IAEA, following the completion of the paper to the satisfaction of the IAEA. |

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| TaskID A.263 | Title Subtas [Agency# / Task Officer] Traceability of DA Measurements - Provis Certified Reference Materials [USA A 1496 / S. Balsley] | Organizatio sion of NBL | Total Budget | Total Spent Con | nments |
|-----------------|--|----------------------------|---------------------|---|--|
| | | NBL | \$103,000.00 | of uranium impurity standards need and will respond to the IAEA with pi continues to work with LANL on the (certified reference material) 126-A | roposed standards production. NBL provision of fifteen units of CRM to the IAEA. NBL and LANL are brials directly from LANL to SAL, due to plutonium materials. Yusuke L in March to discuss the status of |
| A.264 | Analytical Quality Control - Participation SME Programme [USA A 1497 / S. Balsley] | of SAL in NBL | | | |
| | | NBL | \$25,000.00 | \$21,154.75 Chino Srinivasan (NBL) maintained (IAEA-SAL) concerning their participe Measurement Evaluation (SME) prowers shipped to the IAEA in Januar analysis of the samples in February plans. The laboratories have begur the first set of results by the end of | pation in the Safeguards ogram for FY 2006. The samples y. NBL developed the schedule for mathematical Mr. Balsley approved the analysis on the measurements. NBL expects |
| A.265 | Environmental Sampling Evaluation Sup [USA A 1498 / W. Fuhr] | | # 200 000 00 | 0004.070.00 | |
| | | ORNL | \$209,000.00 | January and February 2006. She p | evaluation and data interpretation. eeks in Vienna during the months of rovided environmental sampling researching and drafting a report on |
| | A.265.01 | ORNL | \$32,000.00 | \$32,000.00 There has been no activity reported | for this quarter |
| A.266 | Expert - Unattended and Integrated Moni Systems [USA E 1584 / M. Zendel] | toring | | | |
| | | IAEA | \$50,000.00 | | ing Systems Expert - The SSTS angner for this task at its February 2, ected to start this CFE assignment in |

| | | Title | | | |
|-----------------|----------|---|-----------------------|--------------|--|
| TaskID A.267 | Subtas | [Agency# / Task Officer] Development of ISOCS Self Modeling Capabi [/] | Organizatio lities | Total Budget | Total Spent Comments |
| | | | IAEA | \$193,000.00 | \$0.00 Development of ISOCS Self Modeling Capabilities - The SSTS approved funding at its March 28, 2006, meeting for Canberra to develop advanced techniques to improve the functionality and usefulness of the ISOCS efficiency calibrations to meet IAEA Safeguards verification of nuclear material objectives. This work will be contracted by the IAEA. |
| B.080 | | Training Workshop in Design Information Rethe Entire Life Cycle of Research Reactors [USA B 984 / P. Rodriguez] | view for | | |
| | | | BNL/SAC | \$305,000.00 | \$305,000.00 This task is on stand by. |
| | | | ORNL | \$0.00 | \$0.00 This task is on stand by. |
| | B.080.01 | | ISPO | \$90,200.00 | |
| B.082 | | Safeguards Training Course: Enrichment Tec | hnology | | · |
| | | [USA B 1001 / M. Hunt] | ORNL | \$493,020.00 | \$389,255.00 |
| | | | ORNE | \$493,020.00 | In February, the IAEA requested that ORNL conduct two enrichment courses in June 2006. ORNL has submitted a proposal to ISPO, which is under review. |
| B.084 | | Revision of Introductory Course on Agency S | SG (ICAS) | | |
| | | [USA B 1106 / H. Barroso] | Sonalysts | \$578,000.00 | \$516,467.00 This task is on stand by. |
| B.088 | | Enhanced Communication Skills [USA B 1245 / D. Liles] | | | |
| | B.088.01 | | Sonalysts | \$26,500.00 | \$0.00 The SSTS approved funding at its February 2, 2006, meeting for Sonalysts to conduct the Enhanced Communication Skills course for two weeks to train inspectors. |

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| TaskID | Subtas | Title [Agency# / Task Officer] | Organizatio | Total Budget | Total Spent Comments |
|--------|----------|---|-------------|----------------|--|
| B.090 | 24244 | Workshop on Quality Assurance Techniques [JNT USA B 1277 / D. Neal] | 01 g | Tour Budger | |
| | B.090.02 | | IAEA | \$180,000.00 | \$0.00 |
| | | | | | The SSTS approved funding at its February 2, 2006, meeting for three five-day Awareness Workshops for IAEA Safeguards staff and three two-day Leadership Seminars for Safeguards managers. These will be needed in 2006 and 2007 to train the necessary staff and managers within the Department of Safeguards. |
| B.091 | | Training on Remote Monitoring and Unattender Monitoring | ed | | |
| | | [USA B 1337 / P. Hypes] | | 4 | A |
| | B.091.03 | | LANL | \$273,500.00 | \$123,391.00 |
| | | | | | This task requires that a second Radiation Review course be presented in Vienna. The IAEA has requested that this course be held from May 15 to 19, 2006. Course planning and preparations are underway. |
| | B.091.03 | | Sonalysts | \$181,500.00 | \$92,451.00 |
| | | | | | Sonalysts and LANL worked to implement the plan approved by the Agency to upgrade the Radiation Review training course, which was piloted at the Agency in May 2005. Sonalysts has completed the revisions to the Reference Manual for Instrumentation and has updated the lesson plans, based on the LANL instructor's experience in the pilot course. The written examination questions have been reviewed and all errors or ambiguities have been corrected. Sonalysts and LANL have analyzed the inspector job requirements for working with the Radiation Review algorithms and for conducting data analysis. Sonalysts and LANL have drafted learning objectives, based on this analysis. LANL and Sonalysts will draft student guides and lesson plans for these instructional units, in time for the May 2006 course implementation. |
| B.093 | | IAEA Participation in U.S. Sponsored Training Courses | l | | |
| | | [USA B 0086 / P. Hypes] | | | |
| | B.093.05 | | LANL | \$788,986.00 | \$698,986.00 The Advanced Plutonium Verification Techniques course was held from February 22 to March 3, 2006. It was attended by nine senior IAEA inspectors. |
| | B.093.06 | | LANL | \$1,225,748.00 | \$870,412.00 |
| | | | | | There has been no activity reported for this quarter. |
| | B.093.07 | | LANL | \$73,100.00 | \$73,100.00 This task is on stand by. |
| | B.093.07 | | SRNL | \$47,000.00 | \$45,065.00 |
| | | | | | This task is on stand by. |

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| TaskID B.094 | | Title [Agency# / Task Officer] Neutron Pulse Simulator for Training and Test [USA B 1401 / P. Hypes] | Organizatio ing | Total Budget | Total Spen | t Comments |
|-----------------|----------|--|--------------------|--------------|-------------|---|
| | | | LANL | \$543,300.00 | \$502,522.0 | The NPS User Interface Upgrade is progressing. The new user interface tab option called "Student" is approximately eighty percent complete. Additional displays showing detector setup parameters and isotopic composition are now produced. These displays will be used in conjunction with INCC for analysis of the data generated by the NPS. An initial procedure showing how the new user interface can be used has been developed. Tables for approximately ninety-five percent of the sample data that support the new features have been generated and incorporated into the program. An algorithm for adjusting isotopic composition according to a user selected declaration date has been incorporated into the program. Testing for correctness and usability have begun. |
| B.096 | | Workshop on Additional Protocol Activities [USA B 1415 / M. Hunt] | | | | |
| | | | BNL/NCT | \$320,679.00 | \$202,595.0 | 0 |
| | | | | | | BNL hosted Alta Broodryk and Maribeth Hunt (both from the IAEA) in January to exchange ideas on how the IAEA and BNL will interact to produce the Additional Protocol Complementary Access course, which will be presented in June. BNL and the IAEA agreed on the structure of the course. BNL is producing course materials and scenarios. The pilot course will take place from June 12 to 16, 2006 at the IAEA and from June 19 to 23, 2006 at BNL. |
| B.098 | | Enhanced Observational Skills | | | | |
| | | [USA B 1446 / M. Hunt] | Sonalysts | \$258,000.00 | \$253,397.0 | 0 |
| | B.098.02 | | Sonalysts | \$41,000.00 | \$0.0 | The SSTS approved funding at its February 2, 2006, meeting for Sonalysts to conduct the "Enhanced Observational Skills" course for the 54th ICAS class. Funding was approved also for two additional consecutive weeks to train inspectors who need this course. |
| B.099 | | Physical Inventory Taking Computer Based Tr | aining | | | · |
| | | [USA B 1464 / V. Cisar] | ВМІ | \$175,000.00 | \$90,023.0 | 0 The IAEA has granted an extension to the contract. The task is to be completed by the end of June 2006. |

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| | Title | | | | | |
|---------------|-----------------|---|-------------|--------------|-------------|--|
| TaskID | Subtas [Agen | cy# / Task Officer] | Organizatio | Total Budget | Total Spent | Comments |
| B.101 | • | - Senior Instrumentation Specialist - equipment and Procedures | Γraining in | | | |
| | [USA E | 3 1418 / A. Hamilton] | | | | |
| | | | IAEA | \$230,000.00 | \$197,678.8 | 5 |
| | | | | | | The expert Philip Hypes coordinated the Advanced Plutonium Verification Techniques course and provided training. Dr. Hypes collected Agency input on potential future locations for the training conducted in the US under the USSP. He gave impromptu training to experienced inspectors who were preparing for inspections. Dr. Hypes coordinated and developed training in cooperation with various state support programs. The training section NDA lab was returned to the thirteenth floor and re-established with a new layout to better facilitate the training mission. |
| C.110 | Schem Reacto | pment and Test of an Integrated Safe e for Transfers to Dry Storage at CAN ors SA C 1388 / J. Doo] | - | | | |
| | • | • | State Dept. | \$9,300.00 | \$9,300.0 | 0 |
| | | | • | , , | . , | Jon Sanborn (State Department) participated in field trials of an integrated extensional approach for the CANDLI facilities at the Wolsong |

integrated safeguards approach for the CANDU facilities at the Wolsong Nuclear Power Station (Republic of Korea) in April 2005. The purpose of the meeting was to identify integrated safeguards methods to reduce the IAEA inspector effort during spent fuel transfers from the reactor facility to dry cask storage. This task is closed, as agreed at the USSP Annual Task Review Meeting held in Vienna on February 23 and 24, 2006.

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| TaskID C.111 | Subtas | Title [Agency# / Task Officer] Safeguards System for Chernobyl Unit 4 [JNT USA E 1445 / A. Zatsepin] | Organizatio | Total Budget | Total Spent | Comments |
|-----------------|----------|--|-------------|--------------|--|--|
| | | | BNL/NCT | \$281,000.00 | Vie | NL is preparing for the spring 2006 review meeting that will be held in enna to evaluate the progress of the Chernobyl Shelter Safeguards uplementation. |
| | | | Sonalysts | \$246,000.00 | \$128,390.00 | |
| | | | | | mo tim pro re eq | ne Agency completed a partial installation of the access point onitoring system at the Chernobyl Shelter. The installation required ore time than expected, and the Agency team did not have sufficient ne to complete all required work. There were a few technical oblems with equipment which will be corrected when the Agency team eturns to the Shelter in June 2006. The Agency will complete the quipment installation at access point 131 at that time. |
| | | | | | Vie as mo de Th ex Ap be int de | ne Chernobyl Shelter team has scheduled a planning meeting in enna for May 11and 12, 2006. The purpose of this meeting will be to issess the status of the project, to identify those areas that require one attention, and to schedule the work required to complete the sesign and installation of the Shelter Safeguards Monitoring system. In this meeting will address how best to move forward without the expertise and support of Jim Halbig, who will be leaving the Agency in ordin. The status of the New Safe Confinement (NSC) design work will be reviewed to determine if the time is appropriate for the Agency to degrate its future monitoring system into the NSC, while it is in the design stage. |
| | C.111.01 | | LANL | \$60,900.00 | | strument Assistance to Chernobyl Shelter - LANL discussed an |
| | | | | | of | valuation of a Russian NaI detector with Rolf Arlt and Jim Halbig (both the IAEA). Jim Halbig was consulted regarding the effects he oserved on the scope. |
| | C.111.02 | | LANL | \$50,000.00 | \$29,721.00 | |
| | | | | | | iniADC Installation Support - The final characterization has been elayed. Travel will be scheduled. |
| | C.111.03 | | IAEA | \$23,000.00 | \$0.00 | |
| | | | | | ins | MS Electrical Installation Support - The IAEA will execute an stallation contract directly with the Chernobyl Nuclear Power Plant (hNPP) for electrical work at ChNPP. |

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| | • | Title | | | | |
|-----------------|----------|--|--------------------|--------------|---|--|
| TaskID C.112 | (| [Agency# / Task Officer] Consultant - Development Support for Integra Safeguards 'USA C 1451 / D. Hurt] | Organizatio ted | Total Budget | Total Spent | Comments |
| | C.112.02 | · | BNL/NCT | \$16,000.00 | \$0.00 | |
| | | | | . , | рі | istorical Paper on Containment/Surveillance and Timeliness - The roject has not begun. James Larrimore is planning a visit to BNL in lay. |
| | C.112.02 | | BNLCONTR | \$78,500.00 | \$0.00 | |
| | | | | | T B 20 da da m ca re 1! sa pr w (') P p ss m n | the consultant James Larrimore began work under a new contract with rookhaven National Laboratory (BNL) for the period through December 006. Mr. Larrimore is to assist the IAEA in the development of ocumentation for integrated safeguards and to work with BNL to ocument changes in implementation of Containment/Surveillance neasures and timeliness associated with integrated safeguards. He consulted at the IAEA from February 27 through March 18. Mr. Larrimore eviewed ten internal safeguards policy papers, issued initially in 981-83, regarding their current validity and applicability for integrated afeguards. The quality management system (QMS) document review rocedure was used. Based on an initial review, recommendations ever made with respect to whether the policy papers could be withdrawn two), should be revised (seven), or should be retained as is (one). riorities were set and detailed reviews were started for two of the policy papers, which address reporting nuclear loss and production, viewing curveillance films, time of recording exemptions/de-exemptions, naintenance of Agency instruments and devices, and the use of Type E metal seals for Agency safeguards. This review will be continued in lay. |
| C.113 | 5 | Development of Techniques to Estimate the Separative Capacity of R&D Isotopes USA C 1476 / W. Bush1 | | | | |
| | - | • | BNL/NCT | \$25,000.00 | \$17,305.00 | |
| | | | | | | NL provided comments on revisions to the draft report to Karl cheibner (LLNL). |
| | | | LANL | \$40,000.00 | \$29,498.00 | |
| | | | | | | ANL provided comments on the final document to LLNL in January. his task is closed. |
| | | | LLNL | \$55,000.00 | \$50,943.36 | |
| | | | | | | he LLNL/ORNL/BNL/LANL report on the separative capacity of R&D ootopes is finished. The report is in final review at LLNL. |
| | | | ORNL | \$40,785.00 | \$16,990.00 | |
| | | | | | 0 | RNL forwarded comments on the final report to LLNL in February 2006. |

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| TaskID C.114 | Subtas | Title [Agency# / Task Officer] Develop a PBMR Operational Model to Identify Quantify Proliferation Indicators and Possible Diversion Scenarios | | Total Budget | Total Spen | t Comments |
|-----------------|--------|--|-----------|--------------|------------|---|
| | | [USA C 1547 / Y. Touil] | | | | |
| | | | INL | \$40,000.00 | \$34,322.0 | 00 |
| | | | | | | INL completed the detailed core isotopic modeling work required to determine whether or not safeguards could be terminated for spent PBMR fuel. A report describing the work and the conclusions was reviewed by the IAEA. Some minor changes were suggested which are being incorporated into the final report to be published as an INL report. |
| C.115 | | Quality Management Specialist | | | | |
| | | [USA C 1555 / D. Neal] | | | | |
| | | | IAEA | \$171,042.00 | \$45,289.6 | 64 |
| | | | | | | The expert Richard McCullough joined the Agency on January 23, 2006. He is involved in designing and monitoring the continual process improvement, the next phase of activities necessary for the implementation of the Departmental Quality Management System. |
| C.116 | | Determination of Decommissioned Status of F | acilities | | | |
| | | [USA C 1561 / Y. Touil] | | | | |
| | | | BNL/NCT | \$130,000.00 | \$3,925.0 | 00 |
| | | | | | | BNL has placed a contract with Sonalysts. BNL and Sonalysts have begun to plan the project. |
| C.117 | | Expert - Enrichment Plant Safeguards | | | | |
| | | [USA C 1571 / R. Fagerholm] | | | | |
| | | | IAEA | \$50,000.00 | \$55,468.0 | |
| | | | | | | Michael Uzzle began his CFE assignment in the Section for System Studies on March 6, 2006. |
| C.118 | | Application of Safeguards to Geological Report (ASTOR), Group of Experts [USA C 1580 / M. Diaz Menendez] | sitories | | | |
| | | - | ISPO | \$0.00 | \$0.0 | 00 |
| | | | | | | The first IAEA meeting under this task will be held on April 20, 2006, in Vienna. |

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| TaskID D.122 | Title Subtas [Agency# / Systems En [USA D 1158 | gineering Process for SGIT | Organizatio | Total Budget | Total Spent | Comments |
|-----------------|--|----------------------------|---------------|--------------|--------------|--|
| | D.122.01 | | CGE&Y | \$251,000.00 | \$162,839.00 | |
| | | | | | The | ere has been no activity reported for this quarter. |
| | D.122.02 | | BIT | \$70,000.00 | \$67,868.00 | |
| | | | | | The | ere has been no activity reported for this quarter. |
| | D.122.03 | | IAEA | \$70,000.00 | \$0.00 | |
| | | | | | The | ere has been no activity reported for this quarter. |
| D.136 | Expert - Div - Terrence D [USA D 133 | ****** | olicy Officer | | | |
| | | | CFE | \$775,200.00 | \$713,440.89 | |
| | | | | | | rry Dunn completed his CFE assignment in January. This task is nplete. |

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| | | Title | | | |
|-----------------|----------|--|-------------------------|--------------|--|
| TaskID D.137 | Subtas | [Agency# / Task Officer] Consultants - Assistance on Information Co and Information Systems [USA D 1126 / V. Braguine] | Organizatio llection | Total Budget | Total Spent Comments |
| | D.137.01 | [oon 5 1120, tr 5 agains] | BNL | \$16,000.00 | \$0.00 Allen Locke - Mr. Locke consulted for two weeks with the Satellite Imagery Analysis Unit in March 2006. He is scheduled to consult for three weeks, beginning in June 2006, with the Information Analysis Unit and the director of the Division of Safeguards Information Technology. |
| | D.137.01 | | BNLCONTR | \$10,000.00 | \$0.00 |
| | D.137.01 | | ISPO | \$73,840.00 | \$48,023.00 |
| | D.137.03 | | LANL | \$113,000.00 | \$82,712.00 Jeff Bedell - There has been no activity reported for this quarter. |
| | D.137.04 | | LANL | \$255,000.00 | \$187,172.00 Arvid Lundy - Dr. Lundy consulted for two weeks with the IAEA's Division of Safeguards Information Technology in January on the methodology and use of scientific literature as part of the IAEA's open-source collection and state evaluations. Dr. Lundy plans to consult for two weeks three times from June 5 to 16, from June 26 to July 7, and from November 6 through 17. |
| | D.137.06 | | PNNL | \$246,000.00 | \$187,210.10 Ned Wogman - Dr. Wogman consulted for two weeks with SGIT from February 13 to 24, when he wrote four papers. Dr. Wogman is scheduled to consult with SGIT for two weeks twice from May 15 to 26, and from August 7 to 18, 2006. |
| | D.137.07 | | BNLCONTR | \$66,000.00 | \$0.00 Joyce van Berkel - It was decided to manage Ms. Van Berkel's work under a BNL contract. ISPO took the necessary steps to place a contract with Ms. Van Berkel. A working period has been scheduled for July, 2006. |
| | D.137.07 | | SNL | \$208,962.90 | \$124,624.07 Joyce van Berkel - There has been no activity reported for this quarter. Ms. Van Berkel is scheduled to consult for four weeks at the IAEA from July 3 to 28, 1006. This work will be performed under contract with BNL. |
| | D.137.08 | | LLNL | \$187,000.00 | \$122,510.88 George Anzelon - There has been no activity reported for this quarter. Dr. Anzelon has arranged for two consulting visits during 2006. |
| | D.137.09 | | LLNL | \$117,862.00 | \$73,355.35 William Domke - There has been no activity reported for this quarter. Funding from this subtask will be used for a consulting visit by Lisa Owens Davis (D.137.15) in April 2006. |

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| | Title | | | | | |
|------------|---|----------------------------|----------------------------------|---|----------------------------|----------|
| TaskID | Subtas [Agency# / Task Officer] D.137.11 | Organizatio LLNL | Total Budget \$159,982.27 | • | _ | |
| | | | , , | Roger Miller - There has been no activity reported for this quarter. Mr. Miller has arranged for two consulting visits during 2006. | | Mr. |
| | D.137.12 | LANL | \$117,000.00 | \$47,814.00 | \$47,814.00 | |
| | | | | Richard Wallace - There has been no activity reported for this quarter. Dr. Wallace is scheduled to consult for two weeks from May 1 to 15, 2006. | Dr. Wallace | |
| | D.137.13 | LLNL | \$62,500.00 | \$29,969.00 | \$29,969.00 | |
| | | | | Doug Vogt - There has been no activity reported for this quarter. Mr. Vogt has arranged for a consulting visit in September 2006. | | r. |
| | D.137.14 | LLNL | \$62,500.00 | \$30,034.34 | \$30,034.34 | |
| | | | | Jim Hassberger - There has been no activity reported for this quarter. Mr. Hassberger has arranged for a consulting visit in May 2006. | | ∍r. |
| | D.137.15 | LLNL | \$0.00 | \$0.00 | \$0.00 | |
| | | | | Lisa Owens Davis - There has been no activity reported for this quarte Ms. Davis has arranged a consulting visit from April 17 to 28, 2006, using funds from Subtask D.137.09. | Ms. Davis I | |
| | D.137.16 | LLNL | \$12,000.00 | \$0.00 | \$0.00 | |
| | | | | Cyndee Annese - There has been no activity reported for this quarter. This subtask is complete. | | ər. |
| | D.137.17 | BNLCONTR | \$11,200.00 | \$0.00 | \$0.00 | |
| | | | | Caroline Mason - Ms. Mason's support to SGIT will be handled now through a BNL contract with the Research Analysis Corporation (RAC) ISPO took the necessary steps to place a contract with RAC. | through a E | |
| | D.137.17 | LANL | \$20,000.00 | \$19,546.00 | \$19,546.00 | |
| | | | | Caroline Mason - There has been no activity reported for this quarter. Mason is scheduled to consult for two weeks in September 2006, und a contract with BNL. | Mason is s | |
| | D.137.18 | ISPO | \$0.00 | \$0.00 | \$0.00 | |
| | | | | Jacob Blackford - There has been no activity reported for this quarter. Mr. Blackford is scheduled to consult for two weeks in May 2006. | | ər. |
| | D.137.19 | ORNL | \$0.00 | \$0.00 | \$0.00 | |
| | | | | Leonard Phillips - There has been no activity reported for this quarter. This subtask is closed. | | er. |
| | D.137.20 | ORNL | \$80,000.00 | \$41,190.00 | \$41,190.00 | |
| | | | | James David Snider - There has been no activity reported for this quarter. Dr. Snider's first visit of 2006 is scheduled for April 17 to 28 and the second from July 10 to 21. He will be working for the Division Safeguards Information Technology at the IAEA. | quarter. Di and the sec | |
| | D.137.21 | PNNL | \$22,000.00 | \$13,088.00 | \$13,088.00 | |
| | | | | Winston Little - There has been no activity reported for this quarter. | Winston Lif | |
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| | Title | | | | |
|--------|---------------------------------|---------------|---------------|-------------|--|
| TaskID | Subtas [Agency# / Task Officer] | Organizatio T | otal Budget T | otal Spent | Comments |
| | D.137.22 | BNL | \$35,000.00 | \$9,423.00 | |
| | | | | source | n Tatavosian - Mercyhurst College continued to provide open support to the IAEA by former intern Maryam Tatavosian. Ms. sian is scheduled to consult for two weeks at the IAEA in April |
| | D.137.22 | BNLCONTR | \$3,500.00 | \$0.00 | |
| | D.137.23 | LLNL | \$56,000.00 | \$38,952.99 | |
| | | | | analysi | sner - Mr. Essner began work to support open source information s at the IAEA in January under a contract with LLNL. He has working on open source research and analysis at the direction of |
| | D.137.24 | LANL | \$20,000.00 | \$0.00 | |
| | | | | meeting | Consulting - The SSTS approved funding at its February 2, 2006, g for LANL to provide consulting support to the IAEA from their offices. There has been no activity yet. |
| | D.137.25 | LLNL | \$15,000.00 | \$0.00 | |
| | | | | meeting | Consulting - The SSTS approved funding at its February 2, 2006, g for LLNL to provide consulting support to the IAEA from their offices. There has been no activity yet. |
| | D.137.26 | BNLCONTR | \$34,000.00 | \$0.00 | |
| | | | | meeting | cker - The SSTS approved funding prior to its March 28, 2006, g for Sig Hecker to provide consulting services to the IAEA. BNL ce a contract with Dr. Hecker for this work. |

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| TaskID D.141 | Inter | e ency# / Task Officer] nship Program A D 1396 / A. Hamilton] | Organizatio | Total Budget | Total Spent | Comments |
|-----------------|----------|--|-------------|--------------|-------------|---|
| | D.141.05 | | IAEA | \$105,000.00 | | Chris Dalton - Mr. Dalton worked on the CIOSP (Common Inspection Onsite Software Package) 2. He continued preparing the JNFL Project for their QA audit. |
| | D.141.07 | | BNL/OEP | \$895,000.00 | | The 2005-2006 interns are continuing in their assignments. The 2006 Intern Symposium was held in February 2006. Interns James Garner and Lauren Ginsberg were selected to present their papers at the INMM Annual Meeting in July. |
| | D.141.08 | | BNL | \$22,000.00 | | Kimberly Van Dyke - Ms. Van Dyke began work in March 2006 at the IAEA's Section for Installed Equipment, under a short-term contract with the IAEA. The SSTS approved funding under this subtask in April 2006 for Ms. Van Dyke to attend the INMM Annual Meeting in July and to present a paper on her work at LANL. |
| | D.141.08 | | BNLCONTR | \$5,000.00 | \$0.00 | |
| | D.141.08 | | LANL | \$45,800.00 | \$32,713.00 |) Kimberly Van Dyke - Ms. Van Dyke completed her assignment at LANL |

Kimberly Van Dyke - Ms. Van Dyke completed her assignment at LANL on January 12, 2006. In the four months at LANL, she worked to create the template to be used in documenting UNARM systems for LANL and the IAEA. The remaining funds have been used to document systems other than the one used for creation of the template. The Chernobyl Shelter system was used as the template. BN-350 and Chernobyl MMCT systems are being incorporated into the documentation scheme devised by Ms. Van Dyke.

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| TaskID D.148 | Subtas | Title [Agency# / Task Officer] Expert - Special Technology Coordinator [USA D 1443 / M. Nicholas] | Organizatio | Total Budget | Total Spent Comments |
|-----------------|----------|---|-------------|--------------|---|
| | | | CFE | \$438,200.00 | The expert John Hilliard continued collaboration on the N-Vision projes with expert teams for improving information analysis tools. Mr. Hilliand continued working on the migration of Search 97 to Verity's K2 Enterprise system for development of an open source portal. He begoimplementation of advanced information analysis software tools that were procured last quarter. Sub-project teams were designated for the execution of each software product. Mr. Hilliard scheduled a training course on Analyst's Notebook for ten information analysts from SGIT, NUTRAN, and Operations. Arrangement of a case study test was started with Analyst's Notebook, using the IAEA INIS database. A meeting was organized with the INIS unit to discuss collaborative idea Mr. Hilliard continued to work with the Joint Research Centre in open source areas such as machine language translation, duplicate removal clustering, open source alert system, name variant and recognition software, and data visualization. |
| D.149 | | Specialist Training for IAEA's Imagery Analy | ysts | | |
| | D.149.01 | | IAEA | \$8,501.00 | \$8,501.00 The IAEA has deferred additional training in satellite imagery analysis until work on the satellite imagery analysis laboratory upgrade has proceeded. This task is on stand by. |
| D.150 | | Expert - Systems Analyst [USA D 1460 / J. Smith] | | | |
| | | | CFE | \$428,100.00 | \$348,776.08 The expert Scott Miller continued to work on the user-interface prototypes for the Complementary Access System 2.0 project. He is working with both SGCP and the operational divisions to refine these prototypes to meet their needs. Mr. Miller is working on the Consister |
| D.151 | | IAEA Safeguards Information System Re-en | gineering | | User Interface project of the ISIS Reengineering Project (IRP). |
| | | [USA D 1461 / L. Costantini] | TBD | \$0.00 | \$0.00 |
| | | | | | This task provides a mechanism for POTAS-funded support to the ISI Re-engineering Project. Non-POTAS support is tracked under Task SP.62. |
| | D.151.01 | | LLNL | \$26,000.00 | \$28,532.14 Proof-of-Concepts Tests - Ken Masica (LLNL) consulted with the ISIS Re-engineering Project on network security issues for two weeks in January. This subtask is complete. |

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| | Title | | | | |
|-----------------|--|---------------------|--------------|--|--|
| TaskID D.152 | Subtas [Agency# / Task Officer] Software, Hardware and Data Satellite Imagery Analysis Su [USA D 1477 / F. Claude] | | Total Budget | Total Spent | Comments |
| | | IAEA | \$100,000.00 | \$0.00 | |
| | | | | underwattende with Gethe stat purpose Satellite identify sub-conhelp the understaction i with an address | opject to upgrade the satellite imagery analysis laboratory is vay. Two IAEA staff members and a Canadian consultant and a meeting in Thornton, Colorado, from March 6 to 10, 2006, eoEye (formerly Space Imaging, Inc.) and Intergraph to discuss tus of the Satellite Imagery Analysis Laboratory upgrade. The eof the meeting was to perform a requirements review for the elimagery Analysis Unit's geospatial laboratory upgrade, to the IAEA's technical processes, to make the contractor and intractor aware of the imagery analysis laboratory's workflow, to econtractor and subcontractor develop a comprehensive tanding of the IAEA's security requirements, and to identify tems that would require further attention. The meeting ended action list concerning tasks and problems that were not seed fully. |
| | | | | a comp system Oracle deployr attentio A Deve | ntractors recommended that the Agency should either commit to brehensive training program for their designated geospatial administrator or they should recruit a system administrator with 10g experience. However, after three months of successful ment, it is expected that the system will not require the full-time on of a database administrator. |
| | | | | Durinç make fu | g this meeting, IAEA will review a prototype of the future system, urther recommendations, and continue the discussions on any ing issues. |
| D.153 | Junior Professional Officer for [USA X 1513 / C. Creusot] | or the JNFL Project | | | |
| | | IAEA | \$102,000.00 | \$84,453.60 | |

Greg Gerrein reviewed several documents including architecture, requirements, and design for the subsystems of SPAS, SURS, IALS, and IMGT. Mr. Gerrein is enhancing the iFeeder Application, which obtains data from the I3S file store which may be needed locally, to enable higher rate of transfer for the inspectors. He participated in the kickoff meeting for the SURS project. Mr. Gerrein runs maintenance and diagnostic checks of the Rokkasho Systems on a daily basis. He is responsible for small scripting applications which need to be developed for immediate use. Mr. Gerrein is a member of I3S Change Control Board. He evaluated test results from the October trip for the DCE Test Evaluation by data-mining, searching for anomalies, and researching those anomalies. Mr. Gerrein interviewed inspectors and checked documentation to obtain all current I3S procedures.

| TaskID D.154 | Title Subtas [Agency# / Task Officer] Expert - IAEA Safeguards Information System Re-engineering Project [USA D 1520 / L. Costantini] | Organizatio | Total Budget | Total Spent | Comments |
|-----------------|---|-------------|---------------------|--|---|
| | [OSA D 13207 L. COStantini] | IAEA | \$230,000.00 | \$73,752.59 | |
| | | IAEA | \$230,000.00 | The expert and control Re-engined initiated incomposed initiated incomposed initiated incomposed initiated incomposed initiated incomposed initiated incomposed initiated in the process has technical, of Mr. Watts procept technical, of Concept technical, of Concept technical, of Concept technical in Engineerin direct QA so for the Phaproviding do ICAS Inspective departments. | Richard Watts continues to focus on initiating, improving, lling process performance in support of the SGIT ISIS ering Project (IRP). Various improvements have been cluding: weekly vendor management interface activities, live (documentation system), the risk management process, and deliverables acceptance process. The critical acceptance is been addressed to support acceptance criteria from contractual, quality methodology, and payment authorization. participated in the planning and execution of the Proof of sting conducted at the HP European Performance Test soeblingen, Germany, from February 20 to 25, 2006. Ongoing colude the tracking and monitoring of Software Systems is grocess (SSEP) documents and project deliverables, support of various sub-projects, and the development of plans are III Implementation portion of the IRP project. Mr. Watts is levelopment requirements for enhancing and updating the ector training materials. He is conducting quality audits in ment. Mr. Watts is developing training materials for the total Quality Managers. |
| D.155 | Imagery Analyst [USA D 1519 / F. Claude] | | | | |
| | | IAEA | \$0.00 | \$0.00 | |
| | | | | Recruitmer | nt for this position is on hold. |
| D.156 | Software Development Support: LIMS for the [USA D 1523 / S. Balsley] | SAL | | | |
| | | IAEA | \$55,000.00 | \$55,000.00 | |
| D.157 | Windows/Office 2003 Migration for Safeguard [USA D 1548 / R. Gronvius] | s | | assist in Ph Manageme principle at help the IA The IAEA v | sent a letter to ISPO asking officially to use Construx to hase 2 of the Safeguards Analytical Laboratory Information ent System (SALIMS) upgrade. The SSTS had agreed in its December 2005 meeting that Construx could continue to EA. ISPO notified the IAEA formally of the SSTS' approval. will request a proposal from Construx for its assistance in The Phase 2 assistance is expected to be funded by the |
| | [OSA D 1946 / R. GIOIIVIUS] | IAEA | \$87,750.00 | \$0.00 | |
| | | INEK | ψοτ,του.υυ | The deadling | ne for submission of new bids is past. The bids have been A letter documenting the results will be sent to the USSP. |

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| | | Title | | | | |
|-----------------|--------|--|------|--------------|--|---|
| TaskID D.158 | Subtas | | | Total Budget | Total Spent | Comments |
| | | | IAEA | \$121,432.00 | \$48,110.93 | |
| | | | IAEA | \$121,432.00 | T M a co ir e a vv F T (() L N co tt d d d G S S S S S S S S S S S S S S S S | the expert Joseph Damico was employed previously under Task A.253. Mr. Damico transferred to SGIT on January 1, 2006, and began this task as the I3S Project Manager. He briefed SGIT management on the urrent state of the JNFL Project and the I3S development and installations at RRP. Mr. Damico is working with SGIT management to insure that the I3S meets the needs of the inspectors at RRP and has dequate support for operations, development, and testing. The current tersion of the I3S was submitted for Authorization for Safeguards Use at RRP. Mr. Damico is responsible for completion of this process. There were contract kick-offs for the development of the NDA Review NDAR) Subsystem and the Inspection Management-Inspector Activity ist (IMGT-IALS) Subsystem. Euriware and AWST are developing the IDAR subsystem. LANL is developing Nuclear Code related COM components. Dummy COM components representing the interfaces to the Euriware code were developed and tested by Euriware. AWST is eveloping the IMGT-IALS subsystem. Aquila is continuing the evelopment of the Surveillance Review Subsystem (SURS). Cap itemini Ernst & Young is continuing to support the I3S development of the Surveillance Review Subsystem (SURS). Cap itemini Ernst & Young is continuing to support the I3S development of the Surveillance Review Subsystem (SURS). Cap itemini Ernst & Young is continuing to support the I3S development of the Surveillance Review Subsystem (SURS). Cap itemini Ernst & Young is continuing to support the I3S development of the Surveillance Review Subsystem (SURS). Cap itemini Ernst & Young is continuing to support the I3S development of the Surveillance Review Subsystem (SURS). |
| | | | | | th sy d o w a D C Ji | nultiple configurations to meet the testing demands. A draft report on the end-to-end testing of the Data Collection and Evaluation (DC&E) system at RRP conducted last November was released to JSGO for their comments. The IAEA plans to implement an encryption scheme to elay delivery of safeguards measurement data to the state, until the perator has provided the related declaration. Mr. Damico interfaced with JSGO to answer questions related to the technical proposals given the December 2005 JNFL Working Group meeting. He briefed the reputy Director of JSGO on the technical proposals during the MSSP coordinators' meetings in Vienna during March. Mr. Damico traveled to apan with SGIT management to familiarize them with the I3S at RRP and to hold meetings with support contractors. |
| D.159 | | Design and Definition for an Enhanced Information Analysis Architecture [USA D 1564 / M. Murray] | on | | | |
| | | - | LLNL | \$32,000.00 | \$25,749.24 | |

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\$14,000.00

\$11,218.51

SNL

There was no activity scheduled for this quarter.

There was no activity scheduled for this quarter.

| TaskID | | Title [Agency# / Task Officer] | Organizatio | Total Budget | Total Spent | Comments |
|--------|----------|---|--------------|--------------|--------------------|----------|
| E.119 | | Upgrading of GARS Review Software Factory Support | and Software | | | |
| | [| [USA E 1249 / B. Wishard] | | | | |
| | E.119.01 | | Aquila | \$110,000.00 | \$48,000.00 | |

This is an IAEA direct service contract with Aquila to provide quick response to software upgrades for Aquila-designed General Advanced Review Software (GARS) and related products. Aquila received an IAEA purchase order for follow-on funding for GARS and Software Factory Support through December 2006. No new tasks were issued during this period. Aquila has been notified that new tasks will be issued during the second quarter.

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| TaskID E.122 | Subtas | Title [Agency# / Task Officer] URM Systems Standardization and Support [USA E 1274 / T. Pochet] | Organizatio | Total Budget | Total Spent | Comments |
|-----------------|----------|---|-------------|--------------|-------------|--|
| | E.122.02 | | LANL | \$70,000.00 | | Radiation Review for VXI Integrated Fuel Monitor (VIFM) - LANL finished this subtask with the completion of Radiation Review 3.2.0.0, which was released as part of Baseline 2 on December 9, 2005. ISPO has obtained IAEA concurrence. This subtask is closed. |
| | E.122.03 | | LANL | \$140,000.00 | | Performance Review Software - Work on this subtask continues to be on hold, pending the consideration of a new specification and a draft proposal recommending a change of scope. Peggy Moore and Shirley Klosterbuer drafted a new Performance Monitoring Software Requirements Specification in mid-September and forwarded the new specification and the draft proposal to Max Aparo (IAEA) for comment. This task is on stand by, pending the outcome of the IAEA's review of the proposed change of scope submission. |
| | E.122.04 | | LANL | \$314,000.00 | | Multi-Instrument Collect Generic Module (MICGM) - ISPO has obtained IAEA concurrence. This subtask is closed. |
| | E.122.06 | | LANL | \$487,500.00 | | Auxiliary Communication Device (ACD) - The ACD has been produced and tested successfully by the IAEA. The IAEA has requested funding for a follow on task to upgrade the ACD firmware to include sub-second time-date stamping and testing. This subtask will remain open, pending the approval of this newly requested work. |
| | E.122.08 | | LANL | \$157,000.00 | | Unattended Monitoring System Software Modifications - Baseline 2 was issued in December 2005 and addressed many issues on this list. It is now being tested by the IAEA. All remaining items on the list have been entered into the N-1 Team Track system and progress can be tracked through this system. |
| | E.122.09 | | LANL | \$69,900.00 | | Completion and Delivery of Baseline 1 - ISPO has obtained IAEA concurrence. This subtask is closed. |
| | E.122.10 | | LANL | \$100,000.00 | | Study to Convert IAEA Neutron Coincidence Counting (INCC) and Isotopic Review (ISO) to Component Object Modules (COMs) - This was a scoping subtask for the conversion of INCC and ISO to COMs. ISPO has obtained IAEA concurrence. This subtask is closed. |

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| | | Title | | | | |
|--------|--------------------|--------------------------|---------------------|------------------------------|--------------|--|
| TaskID | Subtas E.122.11 | [Agency# / Task Officer] | Organizatio LANL | Total Budget \$121,000.00 | Total Spent | |
| | | | | | | Generic Software Components for the Chernobyl Conditioning Facility - The first release of the new digital video recorder (version 2.0.0.0) was completed and contained in the Baseline 2 delivery in December 2005. LANL is making some minor changes for future release, based on feedback. Work continues on the final testing and documentation for the Data Filtering Analysis program. |
| | E.122.12 | | LANL | \$241,077.00 | \$60,279.00 | 0 |
| | | | | | | Decomposition of Analysis Modules - The CoSrImport and CoMcaImport modules were completed with the preliminary list of methods implemented. The interface documents were updated to reflect the implementation. |
| | E.122.13 | | LANL | \$288,000.00 | \$144,318.00 | 0 |
| | | | | | | Control Board and Baseline Release Management and Support - This subtask was created to establish a software control board to better manage the Unattended and Remote Monitoring (UNARM) software product from LANL N-1. The UNARM Baseline 2 (Revision 0) software was completed and delivered to the IAEA in December 2005. The associated reference CD was published in January 2006. Desiree Coriz has made progress in designing and implementing the UNARM web site. LANL continues to upgrade and generalize the use of the TeamTrack tool to track issues with the UNARM software. TeamTrack was used to generate the first versions of the UNARM Advisories for the web site. In January, Peggy Moore became the chair of the UNARM Software Control Board (USCB), replacing Stephen Betts. Heather Nordquist became co-chair. John Determan continues as co-chair. |
| | E.122.14 | | LANL | \$259,500.00 | \$71,439.0 | 0 |
| | | | | | | INCC and ISO COM Conversion - This subtask involves the conversion of IAEA Neutron Coincidence Counting and Isotopic review codes into COMs. COMs developed under this subtask support Subtask A.247.19: "UNARM Tool COM Support for NDAR." Three components have been determined to no longer be needed by Subtask A.247.19. Therefore, work on these COMs will be delayed until after the completion of A.247.19. |
| | E.122.15 | | LANL | \$55,000.00 | \$11,181.00 | 0 |
| | | | | | | Unattended Monitoring System (UMS) Software Support - This subtask provides the IAEA with continuous technical support regarding UMS software issues, which need to be evaluated and corrected on an accelerated schedule. Several issues have been worked under the technical support code, all of which were minor and below the twenty hour per issue limit, as requested by the SSTS. Monthly reports have been provided to ISPO detailing the expenditure of funds through February 2006. Future reports will be delivered to ISPO bi-monthly. All expenditures under this project are being tracked via the LANL TeamTrack issues tracking system. Reports to ISPO provide the issue tracking numbers under which these funds were spent. |

| | | Title | | | | |
|--------|--------------------|---|----------------------------|-----------------------------|----------------------------|--|
| TaskID | Subtas E.122.16 | [Agency# / Task Officer] | Organizatio LANL | Total Budget \$61,000.00 | Total Spent \$39,919.00 | |
| | | | | | | Baseline 2 Software Training - UNARM Baseline 2 training was developed in January 2006. Two LANL engineers provided training and technical support at the IAEA from January 14 to 20, 2006. Approximately fifteen IAEA SGTS personnel were trained on some, or all, of the UNARM Baseline 2 product. Discussions began to plan for the next major UNARM product release, Baseline 3, in February 2007. The required updates and content of the Baseline 3 still remain to be finalized, based on the meeting notes produced by LANL from the trip. The final trip report from LANL is in progress and is expected to be delivered to the IAEA and ISPO by mid April 2006. ISPO will obtain IAEA concurrence prior to project closeout. |
| | E.122.17 | | LANL | \$34,000.00 | \$17,364.00 | 0 |
| | | | | | | Advance Multiplicity Shift Register (AMSR) Upgrade - The AMSR upgrade project is nearly complete. LANL has completed training IAEA personnel on the AMSR upgrade. Field Programmable Gate Arrays have been programmed and delivered to the IAEA. A procedure has been written and given to the IAEA. |
| | E.122.18 | | Aquila | \$31,000.00 | \$0.00 | 0 |
| | | | | | | MiniADC Firmware Upgrade - The SSTS approved funding on January 20, 2006, for Aquila to perform a Mini Analog to Digital Converter (MiniADC) Firmware Upgrade. This will include modifying and documenting changes to the MiniADC firmware by an Aquila programmer. Aquila is awaiting a purchase order from BNL for this task. |
| | E.122.19 | | SNL | \$189,000.00 | \$21,122.46 | 6 |
| | | | | | | IAEA Equipment Security Support - The SSTS approved funding for this task on February 17, 2006. Dr. Keith Tolk (SNL) will provide technical support on equipment security to the IAEA, including the Mailbox System, Authentication of Jug Passage Detectors, PIMS Ring Traffic Validator, Security Architecture for URMS, Security Plans for SnF Tokens, and Security Plans for SGTS Public Key Infrastructure. |
| E.125 | | Remote Monitoring and Unattended Digital Surveillance Systems [USA E 1330 / M. Aparo] | | | | |
| | E.125.13 | | LANL | \$69,000.00 | \$28,499.00 | 0 |
| | | | | | | Support was provided in both hardware setup and configuration, and in the Immersive Digital Video Review (iDVR) software. LANL assisted the IAEA with setup and configuration procedures for the cameras, and with developing FTP code to drive the cameras for image acquisition. |
| | | | | | | iDVR (Beta) was delivered to the IAEA to allow them to review the images captured from the IPix cameras in an immersive and synchronized manner. The iDVR software is integrated fully into the Integrated Review System software. |

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ISPO has requested that LANL stop working on this task until the remaining scope of this project is understood by all.

| | | Title | | | | |
|-----------------|----------|---|-----------|----------------------------|--------------------|--|
| TaskID E.127 | Subtas | Expert - Remote Monitored Surveillance Syste Development and Implementation Coordinatio (Regula) | | Total Budget | Total Spent | Comments |
| | | [USA E 1350 / M. Aparo] | CFE | \$584,700.00 | \$507,056.07 | 7 |
| | | | | φου ν , η συνου | | The expert James Regula made progress on secure satellite testing. Videoconferencing over satellite with Virtual Private Network was proven viable for special uses and performed well. Mr. Regula ordered mobile satellite systems. He will test them next quarter. Mr. Regula is planning a special remote monitoring (RM) project in Poland to secure a storage facility. All data will be transmitted back to Vienna remotely, where the inspector will be able to authenticate the data with special software. Mr. Regula evaluated a special 180 degree fish-eye camera to determine its compatibility for field use. He linked two new DMOS installations in Canada to the RM network in Toronto. Therefore, all SG equipment in Canada's CANDU reactors are in full RM mode. Mr. Regula attended meetings with the European Space Agency, SGTS, and two satellite consulting companies, to develop recommendations for future SG communications. |
| E.130 | | Integrated Safeguard System for SF Condition Facility (Part 2/3 of Chernobyl Transfer and Conditioning Campaign) [USA E 1361 / G. Ingrao] | ing | | | |
| | E.130.01 | | LANL | \$1,305,000.00 | \$1,302,988.00 | 0 |
| | | | | | | ISPO and the IAEA agreed at the February 2006 task review that this task may be closed. |
| | E.130.01 | | Sonalysts | \$331,227.00 | \$324,464.00 | 0 |
| | | | | | | There was no work performed on this task during this quarter. BNL's contract with Sonalysts is complete. This task is closed. |

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| TaskID E.133 | Subtas [Agency# / Task Officer] Factory Support for DIS [USA E 1108 / B. Wishard] | Organizatio | Total Budget | Total Spent | Comments |
|-----------------|---|-------------|--------------|-------------------------------|--|
| | E.133.01 | Aquila | \$513,301.09 | \$484,841.00 | |
| | E.133.02 | Aquila | \$398,125.91 | (((((| Kent Brown and Anthony Gonzalez continue to provide factory support for the IAEA's existing digital imaging surveillance (DIS) systems. Mr. Brown continued working on review software design for the Next Generation Surveillance System (NGSS). He continued testing GARS hardware platforms for field use. Mr. Brown continued work on a conceptual design for a modular UPS system for current and future surveillance systems. Planning continues for the processing of GARS surveillance data on the SG LAN. Mr. Brown initiated research to replace/upgrade the internal hard drives of SDIS computers. Mr. Gonzalez continued testing and upgrading DIS equipment for field use. He provides liaison support with the factory for DCM 14 upgrades. Mr. Gonzalez is preparing systems and is involved in the planning for GEMINI replacement and DSOS installations in EURATOM countries. |
| | E.133.03 | Aquila | \$134,000.00 | \$103,618.96 | |

Vio Popescu is assisting SG-OC3 with the Bi Digital Imaging System (BDIS) implementation and redesign. BDIS were installed in all facilities with VSEU. The new BDIS design (drawer version) is in production. Mr. Popescu is completing replacing GEMINI systems with DSOS, including concept design, planning, coordination, and site surveys. Eight DSOS were installed. Mr. Popescu designed and implemented an underwater small-camera solution for SDIS for one German facility. Hawk-SG-based Digital Imaging Surveillance (HDIS) system testing and authorization is ongoing. Development of a modular DC-UPS and integration of the PIP9 industrial computer in a 19-inch

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Title

| | | Title | | | | |
|--------|-----------|---|-------------|---------------------|---|--|
| TaskID | Subtas | [Agency# / Task Officer] | Organizatio | Total Budget | Total Spent | Comments |
| E.134 | | Mobile Safeguard System for SF Transportati Chernobyl NPP to Conditioning Facility | ion from | | | |
| | | [USA E 1375 / G. Ingrao] | | | | |
| | | | IAEA | \$55,000.00 | \$55,000.00 | |
| | E.134.01 | | SNL | \$814,355.28 | \$774,241.63 | |
| | | | | | sy co e ^v wc re: | ne Phase 3 task is on hold, pending the disposition of the monitoring stem returned from Chernobyl, through the IAEA, to SNL. Exterior intamination was recorded on one of the containers, necessitating the valuation of the entire shipment. The SNL MMCT team continues to ork closely with the Health Physics experts at SNL in an attempt to solve the issue. The shipment cannot be cleared for transport to quila, until this issue is completely resolved. |
| | E.134.02 | 2 | LANL | \$259,295.00 | \$259,295.00 | |
| | E.134.03 | 1 | Aquila | \$121,250.00 | \$64,088.00 | |
| | | | | | Nu de | MCT system number 1 was returned to SNL from the Chernobyl uclear Power Plant. SNL is determining the procedures for econtaminating the system, prior to the delivery to Aquila for an egineering upgrade. |
| E.135 | | Safeguards Systems for Chernobyl SF Long Storage (Part 3/3 of Chernobyl Transfer and Conditioning Campaign) | Term Dry | | | |
| | E.135.01 | [USA E 1376 / G. Ingrao] | LANL | \$3,923.00 | \$3,923.00 | |
| | E. 133.01 | | LAINL | φ3,923.00 | · · | nis task is on stand by. |
| | | | | | | iio taok io on otana by. |

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| | | Title | | | | |
|--------|----------|--|-------------|---------------------|---------------------------------|---|
| TaskID | Subtas | [Agency# / Task Officer] | Organizatio | Total Budget | Total Spent | Comments |
| E.137 | | Next Generation Camera Module and Server Surveillance Systems [JNT USA E 1437 / B. Wishard] | r-Based | | | |
| | E.137.01 | | Sonalysts | \$109,666.00 | \$98,027.00 | |
| | | | | | NG 10, har sch fror | lin Carroll (Sonalysts) worked with Max Aparo (IAEA) to prepare for the GSS project review meeting, which is scheduled for the week of April 2006, in Vienna. The following topics will be discussed: NGSS dware architecture, software architecture, project financing, project medule, and transitioning NGSS project management responsibility Mr. Aparo to Bernard Wishard. Mr. Aparo has transferred from TIE to SGOA. Mr. Wishard is the Acting Section Head for SGTIE. |
| | E.137.02 | 2 | Aquila | \$160,000.00 | \$0.00 | |
| | | | | | me Hai dev Info ma | ase 1 development of the NGSS is almost complete. The review eting is scheduled to be held from April 12 to 13, 2006, in Vienna. In redware development for the Image Data Generator and software velopment for the Review Software are ongoing. A Geographical formation System which could provide potentially additional data nagement capabilities in the review system will be presented at the eting. |
| | E.137.03 | 3 | IAEA | \$299,000.00 | \$0.00 | |
| | | | | | | March 20, 2006 the SSTS approved funding by e-poll to fund phase 2 the project contingent on successful completion of Phase 1. |
| E.139 | | Expert - Digital Image Surveillance, Unatten Monitoring System Integration and Remote Systems Engineer [USA E 1463 / M. Aparo] | | | | |
| | | | CFE | \$354,900.00 | \$308,556.27 | |
| | | | | | Mo | e expert Lee ReFalo traveled to INPP for the Lithuania Remote nitoring Project to replace two computers that were near failure and the Lithuania Reactor Fuel Transfer Project to review detector |

The expert Lee ReFalo traveled to INPP for the Lithuania Remote Monitoring Project to replace two computers that were near failure and for the Lithuania Reactor Fuel Transfer Project to review detector locations and the rail car for fuel transfer. Testing to the system is in progress for shipment in April and installation in May. Mr. ReFalo traveled to the French MELOX facility for the JMOX Project for a technical review of the MOX fuel fabrication process. He reviewed EURATOM's safeguards equipment installed in the facility. Mr. ReFalo traveled to Sellafield to review the PIMs equipment and installation. He continued to provide support for equipment for general remote monitoring projects. Activities included further development on the state-of-health programs, technical support for Inspectors as needed, remote modifications as necessary, planning for equipment upgrades in the PFPF/PCDF/Monju (Japan) facilities for future data integration, and general support for the RRP and other nuclear facilities.

| | | Title | | | | |
|--------|--------|--|-------------|---------------------|-------------|--|
| TaskID | Subtas | [Agency# / Task Officer] | Organizatio | Total Budget | Total Spen | t Comments |
| E.140 | | Enhancement of Cobra Fibre Optic Seal System [USA E 1475 / G. Weeks] | n | | | |
| | | | IAEA | \$346,000.00 | \$141,400.0 | 00 |
| | | | | | | This task will improve the usability and reduce the vulnerability of the COBRA seal system (seal and verifier) used by the IAEA. The development of the new seal mold and the seal identification method are near completion. Prototyping of the seal database is ongoing. Hardware development of a miniaturized AutoCobra Verifier is almost complete. The design review meeting is scheduled for April 13, 2006, in Vienna. The SSTS approved funding for Phase 3 of this task on |
| E.142 | | Vulnerability Assessment of EOSS and IRES Electronic Seals [USA E 1509 / M. Goldfarb] | | | | |
| | | [OCA E 10007 III. Coldidity] | SNL | \$177.000.00 | \$142,531.4 | 12 |
| | | | | , ,,,,,,, | * / | SNL has completed a vulnerability assessment of the software and firmware of the IAEA's next generation electronic seal, the Electro-Optical Sealing System. ISPO has obtained IAEA concurrence that the product was acceptable and that this task is closed. |
| E.143 | | Junior Professional Officer - Engineers Suppor Unattended Monitoring [USA E 1531 / M. Aparo] | t to | | | |
| | | | IAEA | \$90,000.00 | \$79,781.0 | 08 |
| | | | | | | Nina Wilson tested the functionality of the Integrated Hardware Rack and associated Integrated Detector Enclosures at Headquarters, prior to chiming the system to Charachyl for installation at Beacter 4. A trip to |

shipping the system to Chernobyl for installation at Reactor 4. A trip to complete the installation has been scheduled tentatively for the second guarter of 2006. Planning for this trip includes building a "Mirror System" for training, documentation preparation, functionality tests, and troubleshooting. Technical documentation for the BN-350 project was updated to reflect currently existing equipment parameters and orientation. The currently implemented data retrieval procedure was finalized. A need to upgrade the installed-on-site Review Station was identified during the last inspection trip. Plans to procure and test a newly configured Review Station are underway. TIE identified a need to train staff in MiniGRAND, ILON, and system configuration. A staff training session was held in January. A training session for inspectors on data review is scheduled for the week of May 15, and will combine efforts from TIE and Training. Rigorous testing of new software of the IRS revealed unacceptably slow standards. These problems are being addressed. After receiving data back from integrated unattended monitoring equipment installed at both Chernobyl and BN-350, TIE is using the data to troubleshoot problems and track the performance of the equipment. TIE has identified a need to document systems with MiniGRAND family-based instrumentation. An approach has been identified.

| TaskID E.144 | Title Subtas [Agency# / Task Officer] Ultrasonically Interrogated Metal Seal [USA E 1532 / M. Goldfarb] | Organizatio | Total Budget | Total Spent Comments | |
|-----------------|--|-------------|--------------|---|---------|
| | | INL | \$15,000.00 | \$14,402.00 INL is conducting a feasibility study regarding in-situ verification of the IAEA's metal cup seal using ultrasonic techniques. The first task under this project was completed and demonstrated conclusively the usefulness and potential of this technology. Results and status were presented to the SSTS and ISPO during a January 2006 visit to INL. Authorization is needed to proceed with follow-on tasks. | |
| | | PNNL | \$100,000.00 | \$120,576.10 PNNL is conducting a feasibility study regarding an acoustic method for performing an in-situ verification of the existing IAEA metal cup seal. In-situ interior signature verification will vastly improve the timeliness of metal seal verification, because a result will be determined without the need to wait for transportation to Vienna for evaluation by the IAEA at Headquarters. A proof-of-principle report is still in draft stage and is awaiting feedback from the IAEA, prior to completion. | of e |
| E.145 | VOID-3 Vulnerability Assessment [USA E 1533 / H. Undem] | | | | |
| | | LANL | \$296,000.00 | \$204,493.00 LANL completed a detailed video showing an attack on the current IAI VOID pressure sensitive adhesive seal, in the context of its current us protocol. LANL completed evaluations of four new adhesive seal designs, which may overcome the vulnerabilities demonstrated in the video. One of these new seal designs proved to be very promising, while another is not as good, but still potentially an improvement over the current design. | |
| E.146 | Feasibility Study for Change Detection So Applied to Metal Seal Signatures [USA E 1534 / H. Undem] | ftware | | | |
| | | INL | \$52,000.00 | \$48,573.00 INL is conducting a feasibility study to evaluate the use of Change Detection Software (CDS) to accelerate the verification process of IAEA's metal seals in the seals laboratory. The Feasibility Study task was completed, and results presented to the SSTS and ISPO. Resulwere discussed with the IAEA project leaders at the end of 2005. The CDS technology was found to be extremely useful in this application, with high potential for expansion to other interrogations. Additional tas authorization will be required for project continuation. | Э |

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| TaskID E.147 | Subtas [Agency# / Task Officer] MMS Software Update [USA E 1535 / G. Weeks] | Organizatio | Total Budget | Total Spent | Comments |
|-----------------|--|-------------|--------------|--------------------|--|
| | | SNL | \$33,000.00 | r tl h n | SNL hosted Michael Goldfarb and Georg Weeks (both from the IAEA) to efine the requirements for the Material Management System upgrade at the K-Area Material Storage facility at Savannah River. The proposal has been revised to reflect only the high priority tasks, as a result of this neeting. The revised proposal has been submitted to ISPO for SSTS consideration. |
| E.148 | Expert - Senior Sealing Systems Engineer [USA E 1545 / M. Zendel] | SRNL | \$8,000.00 | \$0.00 F | Please see Task E.147, Contractor: SNL. |
| | | CFE | \$83,332.00 | \$30,751.68 T | he expert Halvor I Indem is overseeing the VOID-3 Seals Design |

The expert Halvor Undem is overseeing the VOID-3 Seals Design Contract. Press-sample runs of the four new designs for the next Agency adhesive seal have been ordered, and should be delivered next guarter under the Adhesive Seal Project. Formal documentation with respect to ultrasonic approaches to metal cup seal and wire verification methods has been received and is under review. Agency in-house vulnerability assessment (VA) activities are in progress. The joint project review of the adhesive seal development project resulted in the delivery of four specific design proposals for the VOID-3. An in-house VA activity is in progress with respect to the Agency seal wire. Phase I of this work has been completed. Phase II is underway. The metal seal project has been separated into two tasks. PNNL has demonstrated and documented two potential methods for quantitative wire integrity examinations, including both ultrasonic and eddy current techniques. A formal report on these techniques was prepared and is under review. There are four parallel in-situ signature extraction efforts anticipated, with three in progress. A decision has been made to evaluate the feasibility of using the laser surface authentication technique to authenticate an intrinsic signature for the metal cup seal. Two efforts that include ultrasonic scanning techniques were demonstrated to Agency representatives. In each case, proof of scientific principle was established. Formal reporting was received. The final technique under examination and evaluation is the use of Radio Frequency Identifying tags within the metal cup seal. Dr. Undem gave a presentation on IAEA Sealing Systems for International Safeguards at the 7th Security Seals Symposium held in the Santa Barbara, California, from February 28 to March 2, 2006.

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Title

| TaskID E.149 | Subtas | Title [Agency# / Task Officer] Vulnerability Assessment of the "Sign and Fo System" (SNFS)" [USA E 1581 / A. Alessandrello] | Organizatio orward | Total Budget | Total Spent Comments |
|-----------------|----------|---|-----------------------|--------------|---|
| E.150 | | Development of a Conduit Monitoring System | SNL | \$179,000.00 | \$20,246.36 This task was approved at the December 1, 2005, SSTS Meeting. The purpose of this task is to complete an independent vulnerability assessment of the Sign and Forward System, with primary concentrati on the software. Funding was received in February 2006, and the tas has begun. |
| E.130 | | [/] | I | | |
| | | | ORNL | \$194,000.00 | \$1,778.00 |
| | | | | | The SSTS approved this task at its February 2, 2006 SSTS meeting. |
| | | | | | ORNL will develop and demonstrate an enhanced distributed capacitance sensor system employing Electrical Signature Analysis, which incorporates actual IAEA conduit and cable hardware constructed into credible deployment scenarios. ORNL received the funding authorization letter for this task on March 9, 2006. |
| E.151 | | Vulnerability Assessment of the Tamper Indic | cating Foil | | |
| | | [/] | | | |
| | | | SNL | \$79,000.00 | \$0.00 The purpose of this task is to complete an independent vulnerability assessment of the tamper indicating foil proposed for all newly developed safeguards equipment put in the field by all IAEA Operation Divisions. This task was approved by the SSTS in March 2006. SNL i awaiting funding. |
| E.152 | | New Shift Register Development | | | Ç Ç |
| | | [/] | | | |
| | E.152.01 | | LANL | \$162,000.00 | \$144.00 |
| | E.152.02 | | Aquila | \$127,250.00 | \$0.00 |
| F.032 | | Consultant - Services Safeguards Issues (R. I [USA C 1134 / J. Cooley] | Hooper) | | |
| | | | IAEA | \$609,336.87 | \$541,723.00 The consultant Richard Hooper assisted the Secretariat's work with Committee 25 by preparing a paper on the status of strengthened safeguards. Several additional modules for the seminar on strengthened safeguards were updated during a recent visit to Vienna. |

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| TaskID F.036 | Title Subtas [Agency# / Task Officer] Fixed Term Assistant - Procurement Services [USA F 1472 / A. Hamilton] | Organizatio s | Total Budget | Total Spent Comments | Spent Comments |
|-----------------|--|------------------|--------------|--|---|
| | | IAEA | \$356,000.00 | | |
| | | | | This CFE position provides continual management of change requests and contract amendments for the IAEA Safeguards Information System Re-engineering Project. The physical architecture development portion is undergoing technical and financial evaluation. Internal discussion is ongoing as to the Phase III approach. The project has redirected from an application-by-application approach to a process approach (clustering of projects). Steps are being taken to preclude a full-blown renegotiation and to mitigate risk. Several contracts have been issued in regard to the Integrated Inspector Information System. Other Safeguards related service orders and contracts have been issued and/or released. Proposals for the SPRICS 2.0 project have been received and are under technical evaluations. | and contract amendments for the IAEA Safeguards Info Re-engineering Project. The physical architecture deve is undergoing technical and financial evaluation. Intern ongoing as to the Phase III approach. The project has an application-by-application approach to a process ap (clustering of projects). Steps are being taken to preclu- renegotiation and to mitigate risk. Several contracts ha in regard to the Integrated Inspector Information Syster Safeguards related service orders and contracts have be and/or released. Proposals for the SPRICS 2.0 project |
| F.037 | SAL Feasibility Study Workshop [/] | | | | |
| | | Sonalysts | \$86,500.00 | \$0.00 | \$0.00 |
| 0.000 | The Decimal Development of an Oriental | 0 | | The SSTS approved this task by e-poll on April 10, 2006. | The SSTS approved this task by e-poll on April 10, 200 |
| S.026 | The Design and Development of an Orientation for U.S. CFEs and IAEA Staff [USA X 943 /] | on Course | | | |
| | - | ISPO | \$395,487.00 | \$395,487.00 | 487.00 |
| | | | | Susan Pepper met with Jeanne Anderer in February in Vienna to discuss the development of the intern guidebook. Ms. Anderer met with Catherine Osiecki and Mel Morris of the Office of Educational Programs Ms. Anderer plans to complete a draft of the intern guidebook in April. | discuss the development of the intern guidebook. Ms. Catherine Osiecki and Mel Morris of the Office of Educa |
| S.036 | Integrated Safeguards Consultations [USA X 1315 / L. Gourgon] | | | | |
| | | BNL/NCT | \$799,245.00 | • • | |
| | | | | David Gordon finished and distributed the final report for this task in December 2005. Mr. Gordon provided three copies of the report to ISP and two copies to the Department of State in early January. The approved scope of work is complete. This task is closed. | December 2005. Mr. Gordon provided three copies of and two copies to the Department of State in early Janu |
| | | ISPO | \$32,349.00 | \$32,349.00 | 349.00 |
| | | LLNL | \$12,300.00 | \$12,300.00 | 300.00 |
| | | ORNL | \$33,875.00 | \$33,875.00 | 875.00 |
| | | PNNL | \$25,000.00 | \$24,505.00 | 505.00 |
| | | SNL | \$9,894.51 | \$9,894.51 | 394.51 |

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| TaskID S.037 | Title Subtas [Agency# / Task Officer] ISPO Recruitment Program [USA X 942 /] | Organizatio | Total Budget | Total Spent | Comments |
|-----------------|--|-----------------|--|---|---|
| | | ISPO | \$276,422.00 | W 8 si R to fc 2 re (IS | Ilbert Queirolo and Donna Occhiogrosso (ISPO) attended the Military West 2006 Conference and Expo in San Diego, California, from January to 13, 2006. Jacob Blackford and Michele Rabatin (ISPO) recruited tudents for IAEA internships at the ANS Student Conference at tensselaer Polytechnic Institute (RPI) in Troy, New York, from March 30 o April 1. Plans are underway to distribute information at the Institute or Nuclear Materials Management in Nashville, Tennessee, in July 006. ISPO and ANL have obtained a booth. They will speak about ecruitment issues and concerns at a poster session. Catherine Monzel IAEA Personnel Department) will be attending and exhibiting at the SPO booth. Susan Pepper, Jacob Blackford, and Michele Rabatin SPO) participated in a videoconference with UNVIE, State Department, DOE, and ANL on recruitment issues in February. The ISPO white aper on recruitment was discussed during the videoconference. |
| S.049 | IAEA Travel for US Support Program T [USA X 1306 / A. Hamilton] | | | | |
| | | IAEA | \$1,895,929.00 | S | his task provides funding to the IAEA for task related travel. The STS responds to quarterly travel projections prepared by the IAEA's support Program Administration. |
| S.053 | Non-Proliferation and Disarmament (Ni SG Equipment [USA X 1342 / A. Reynaud] | DF) Funding for | | | |
| | [USA X 1342 / A. Reynaud] | IAEA | \$3,106,639.00 | \$3,106,639.00 | |
| | | | V , , , , , , , , , , , , , , , , , , , | T th N fc | his task was established to track the expenditure of funding provided frough the Nonproliferation and Disarmament Fund (NDF) in 2000. The NDF office approved funding in 2000 for the procurement of equipment or the geospatial laboratory and digital image surveillance. ISPO, the AEA, and the State Department's NDF office are working together to xpend the remaining funding and to close out this account. |
| S.057 | USVC Funding in 2001 for SG Equipme [USA X 1393 / A. Reynaud] | ent | | | |
| | [JOA A 1999 A. Neynadu] | IAEA | \$10,154,770.44 | р | his task was established to track the IAEA's expenditure of funding rovided in the 2001 US Voluntary Contribution for the procurement of afeguards equipment. |

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| TaskID S.060 | Title Subtas [Agency# / Task Officer] Contracts Labor Charge [/] | Organizatio | Total Budget | Total Spent | Comments |
|-----------------|---|-------------|----------------|----------------|--|
| | | ISPO | \$231,707.00 | \$225,442.00 |) |
| | | | | | This task provides funding for the labor charges that are incurred by the BNL Procurement and Property Management Division, while executing contracts and purchase orders for USSP tasks. |
| S.061 | 2002 U.S. Voluntary Contribution for Sa Equipment [USA X 1490 / A. Reynaud] | afeguards | | | |
| | | IAEA | \$6,634,575.73 | \$5,613,696.39 | |
| | | | | | This task was established to track the expenditure of the 2002 US Voluntary Contribution for Safeguards Equipment. |
| S.062 | ISIS Reengineering [USA X 1491 / M. Strohmayer] | | | | |
| | | IAEA | \$9,069,516.67 | \$358,741.00 | |
| | | | | | This task was established to track US Voluntary Contributions to the ISIS Reengineering Project (IRP). The IAEA has decided to pursue a process-oriented approach, rather than converting applications as they were organized previously. The IAEA must undertake business process engineering to define the software packages which they will need for the new system. |
| | S.062.01 | IAEA | \$612,943.33 | \$412,943.33 | 3 |
| | | | | | NPT Accounting Software - In November 2005, the IAEA requested a change of scope for the use of funding in the amount of \$200,000 that was approved in November 2004. The new scope of work to make enhancements to the NPT Accounting Software requires funding in the amount of approximately \$130,000. The SSTS approved the revised scope of work prior to the March 28, 2006, SSTS meeting. |
| S.065 | NDF 2002 | | | | |
| | | IAEA | \$4,157,661.00 | | This task was established to track the expenditure of funding provided through the Nonproliferation and Disarmament Fund (NDF) in 2002. The NDF office approved funding for high priority NDA and surveillance |
| | | | | | equipment. ISPO, the IAEA, and the State Department's NDF office are working together to expend the remainder of the funding and to close out the account. |

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| | Title | | | |
|-----------------|--|-------------|----------------------------|---|
| TaskID S.066 | Subtas [Agency# / Task Officer] 2003 USVC for Safeguards Equipment [/ A. Reynaud] | Organizatio | Total Budget | Total Spent Comments |
| | | IAEA | \$7,700,000.00 | \$3,332,939.50 This task was established to track the IAEA's expenditure of funding provided in the 2003 US Voluntary Contribution for the procurement of Safeguards equipment. |
| S.069 | 2004 USVC for Safeguards Equipment [/ A. Reynaud] | | | |
| | [/ A. Reynauu] | IAEA | \$4,359,600.00 | \$1,996,922.98 This task was established to track the IAEA's expenditure of funding provided in the 2004 US Voluntary Contribution for the procurement of Safeguards equipment. |
| S.071 | NDA Training Course Relocation | | | |
| | [/ P.Hypes] | 10.50 | # 5 000 00 | # 0.00 |
| | | IAEA | \$5,000.00 | \$0.00 There has been no activity reported for this quarter. |
| | | INL | \$45,000.00 | \$30,820.00 |
| | | | | During the January 2006 SSTS and ISPO visit to the INL, it was suggested that INL attend the February 2006 Advanced Plutonium Verification Training Course at LANL. INL attended portions of this course and discussed the potential INL nuclear material that would be used if the course were to be relocated. Based on these discussions, a summary of the INL material to be used and potential effects on the effectiveness of the course will be submitted to ISPO by mid-April 2006. |
| | | ISPO | \$36,000.00 | (\$1,060.00) |
| | | | # 20 5 20 00 | There has been no activity reported for this quarter. |
| | | LANL | \$23,500.00 | \$23,500.00 There has been no activity reported for this quarter. |
| | | SRNL | \$4,000.00 | \$0.00 |
| | | | | There has been no activity reported for this quarter. |
| S.072 | Technical Meeting on Novel Technologies discussion of OIOS MSSP Management Au Washington, February 24-25, 2005 [/ J. Whichello] | | | |
| | | IAEA | \$0.00 | \$0.00 This task is on stand by, awaiting proposals from the IAEA for new activities related to novel technologies. Many such activities are being conducted under other USSP tasks described in this report. |

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| TaskID S.073 | Title Subtas [Agency# / Task Officer] 2005 USVC for Safeguards Equipment [/ A. Reynaud] | Organizatio | Total Budget | Total Spent | Comments |
|-----------------|--|-------------|----------------|-------------|----------|
| | | IAEA | \$4,241,850.41 | \$0.00 | |

This task was established to track the IAEA's expenditure of funding provided in the 2005 US Voluntary Contribution (USVC) for the procurement of Safeguards equipment. When use of this funding was reviewed and approved by the SSTS in May 2005, the SSTS asked that the IAEA use remaining funding from previous years before using the 2005 USVC funding. This will ensure that previous years' funding is expended completely.

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| TaskID S.075 | Title Subtas [Agency# / Task Officer] Safeguards Tools for the Future [/] | Organizatio | Total Budget | Total Spent Comments |
|-----------------|---|-------------|--------------|--|
| | | BNL/NCT | \$11,000.00 | \$9,313.00 There has been no activity reported for this quarter. BNL's scope of work is complete. |
| | | INL | \$9,500.00 | \$9,879.00 There has been no activity reported for this quarter. INL's scope of work |
| | | ISPO | \$17,000.00 | for this task is complete. \$0.00 Sonalysts completed the report of the workshop on Safeguards Tools for the Future on February 1, 2006. They are still working on converting the videotape to DVD. SSTS approved additional funding on March 20, 2006, for Sonalysts to draft a vision and strategy document based on the results of the meeting. |
| | | LANL | \$20,000.00 | \$19,488.00 There has been no activity reported for this quarter. LANL's scope of work is complete. |
| | | LLNL | \$9,500.00 | • |
| | | ORNL | \$9,908.00 | · |
| | | PNNL | \$12,000.00 | · |
| | | SNL | \$17,000.00 | · |
| | | Sonalysts | \$103,000.00 | · |

| TaskID S.077 | Title Subtas [Agency# / Task Officer] Web-based ISPO Information System | Organizatio | Total Budget | Total Spent | Comments |
|-----------------|---|-------------|--------------|--------------------|----------|
| | [/] | LANL | \$100,000.00 | \$0.00 | |

Development of the ISPO Process and Information System - The SSTS approved funding at its March 28, 2006, meeting for the Information System Analysis and Development (ISAD) team at LANL to develop a new database accessible to the SSTS, contractors, and the IAEA. ISPO intends to maintain most of the features of the POTAS database, add project management tools, and automate ISPO business

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